

Appl. No. 10/016,238
Amdt. Dated December 6, 2005
Reply to Office action of September 21, 2005

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Listing of Claims

Claims 1-24 (canceled)

Claim 25 (new) A system for communicating packets on channels in accordance with Bluetooth protocols, said system comprising

a plurality of radio modules, each of said modules having associated therewith an independent clock

a plurality of radio interfaces, each of said interfaces being coupled to a respective one of said radio modules;

a base band controller coupled to said radio interfaces, said base band controller having first inputs receiving individual clock counts from individual clocks associated with said radio modules and second inputs receiving factory assigned Bluetooth addresses from said radio modules;

a prediction circuit for generating markers indicative of frequency collisions on said channels, said prediction circuit being coupled to said base band controller and including

a matrix generator having a first coordinate representing a selectable number of successive future time slots and second coordinates respectively exhibiting channel hopping patterns of activated channels during such future time slots;

a scanner for scanning the first coordinates of the matrix to detect the occurrence, if any, of identical frequency hops at an intersection of a scanned first coordinate and a pair of second coordinates, such occurrence being indicative of a collision in the future time slot associated with such intersection;

a pattern segment selector;

memory units connected to said base band controller;

delay circuits connected between said memory units and said pattern segment selector whereby frequencies extracted by said selector may be time shifted before being applied to the said matrix generator to compensate for a lack of synchronization of channel hopping patterns, and

wherein said selector responsive to said scanner provides a control signal to said matrix generator to increment the matrix generator, and

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an adjustment circuit coupled to said prediction circuit, said adjustment circuit causing said prediction markers to direct said base band controller to alter the transmission of data packets on said channels by altering the size of the data packets to allow multiple transmissions on said channels despite the generation of markers indicative of frequency collisions.

Claim 26 (new) The system in accordance with claim 25 wherein said scanner is configured for repetitive scans of the first coordinates of the matrix, successive scans of the first coordinates being incremented by a selectable number of time slots at the end of each scan that does not detect such occurrence of a collision.